

No. 630,605.

H. M. & H. A. GORDON.

Patented Aug. 8, 1899.

CONDUIT OR PIPE.

(Application filed Mar. 11, 1899.)

(No Model.)

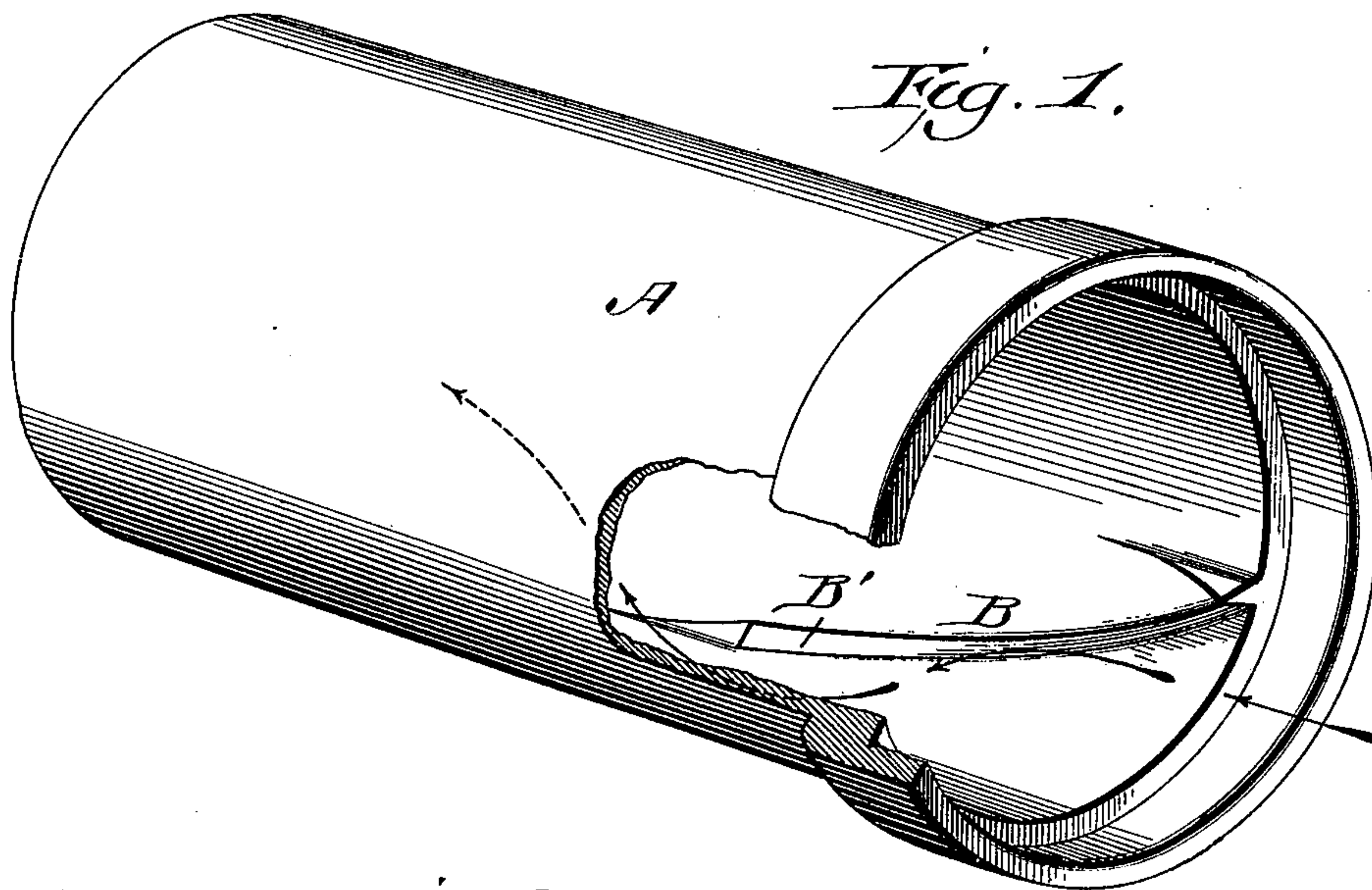


Fig. 2.

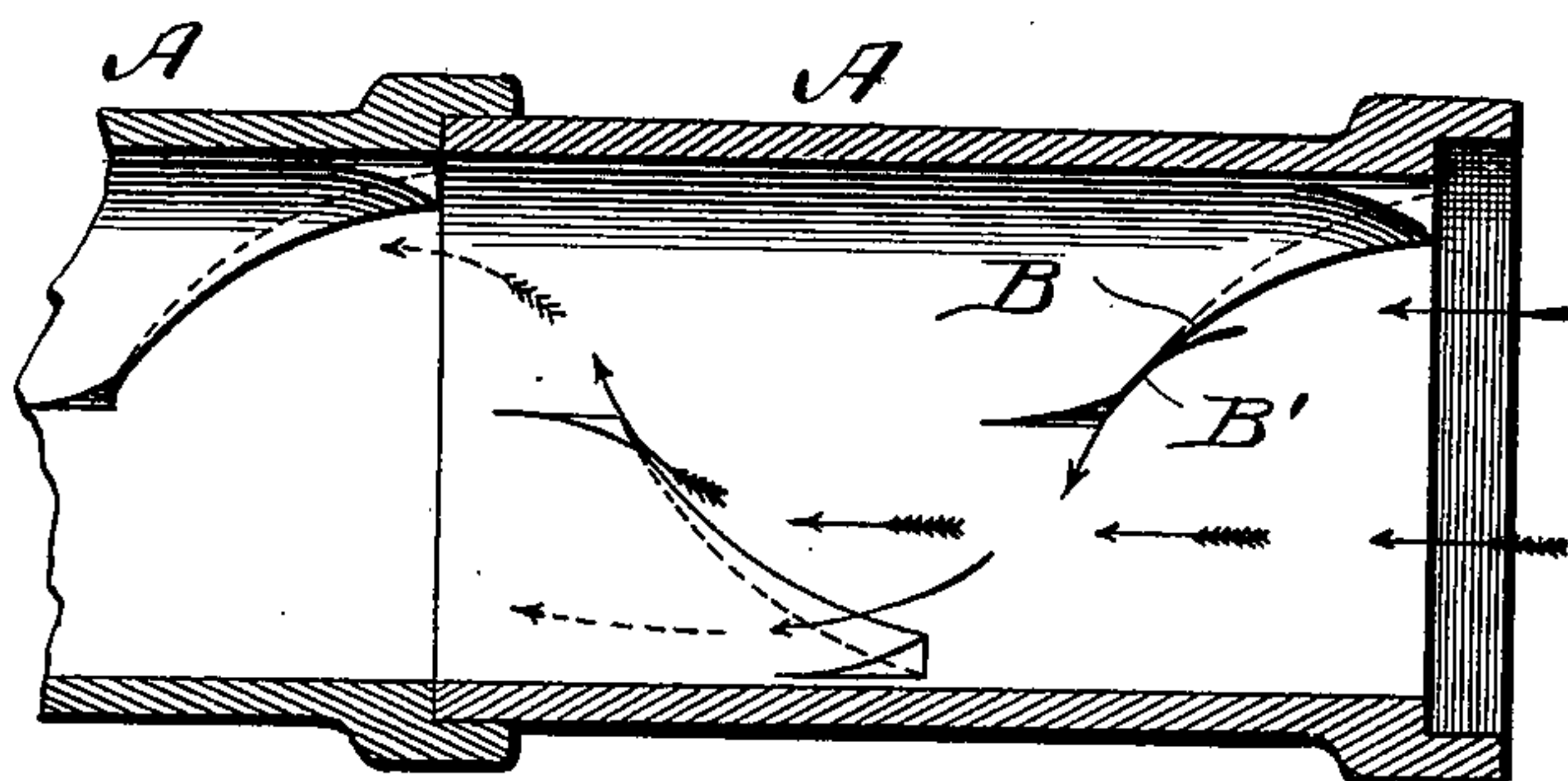


Fig. 3.

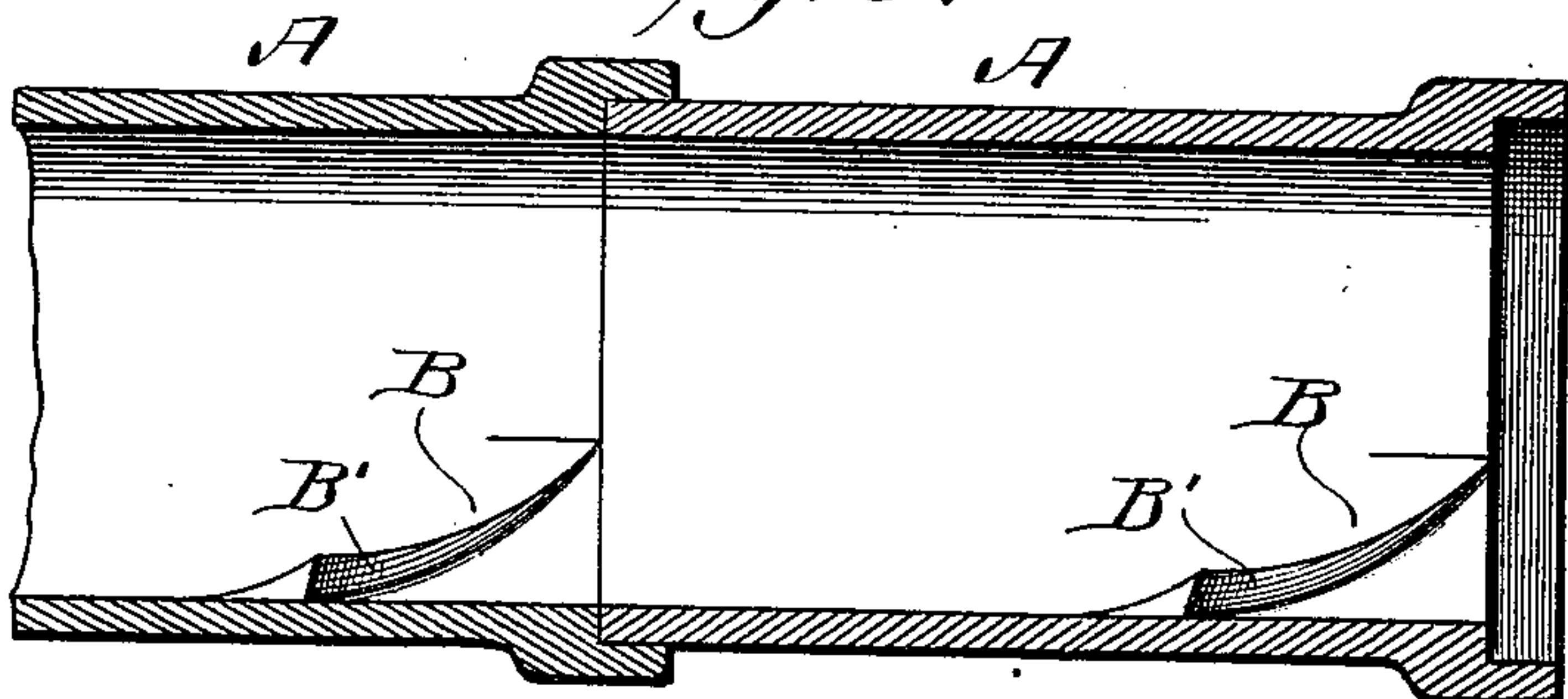
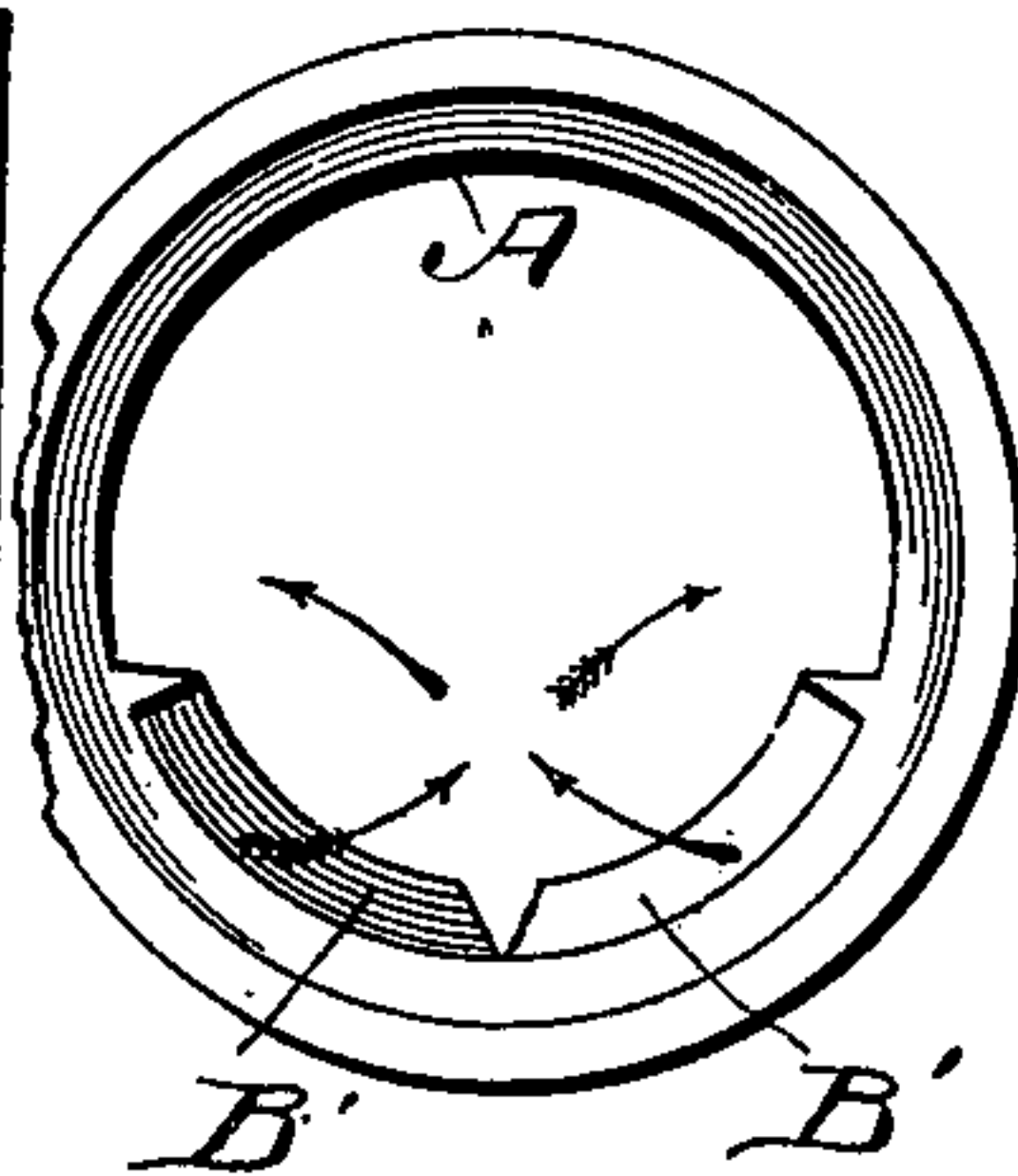


Fig. 4.



Witnesses:
John L. Sutton
Jra. L. Sutton

Inventors
Henry M. Gordon
Henry A. Gordon.

UNITED STATES PATENT OFFICE.

HENRY M. GORDON AND HENRY A. GORDON, OF DORRANCETON,
PENNSYLVANIA.

CONDUIT OR PIPE.

SPECIFICATION forming part of Letters Patent No. 630,605, dated August 8, 1899.

Application filed March 11, 1899. Serial No. 708,782. (No model.)

To all whom it may concern:

Be it known that we, HENRY M. GORDON and HENRY A. GORDON, citizens of the United States, residing at Dorranceton, in the county of Luzerne, State of Pennsylvania, have invented certain new and useful Improvements in Pipes or Conduits, of which the following is a specification, reference being had therein to the accompanying drawings, forming part thereof.

The invention relates to an improved construction of pipes or conduits for conducting liquids in such a manner as to leave the pipe free from any deposit of sediment from the flowing liquid.

The object of the invention is to divert the flowing liquid nearest the bottom and sides of the pipe from a straight course into a transverse course, causing it to flow from one side of the pipe over the bottom and up the other side into the longitudinally-moving body of liquid above, thus constantly sweeping the subsiding and deposited sediment up into the higher flowing body of liquid to be carried forward through the pipe.

The invention consists in locating within the pipe or conduit suitable ribs, which extend upward from the bottom of the pipe a distance not greater than one-half of the side of the pipe and incline toward the inlet end of the same.

The invention further consists in the location of a series of such ribs alternately disposed at any angle to each other to produce alternately opposite currents of the liquid upward into the moving body of liquid above the ribs.

Other objects and advantages of the invention will hereinafter appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective with part broken away; Fig. 2, a central horizontal section; Fig. 3, a central longitudinal section, and Fig. 4 a cross-section through one of the ribs.

Like letters of reference indicate like parts throughout the several figures of the drawings.

The letter A designates a pipe or conduit

which may be of any desired cross-section or size. Located within such a pipe is a deflecting-rib B, the dimensions and angle of location of which may be varied to meet the requirements to which the conduit may be subjected. This rib is provided with a contact-face B', against which the lower body of liquid in the pipe will strike and be deflected transversely of the pipe and upward at the opposite side into the upper body of liquid, which is flowing longitudinally of the pipe. In the preferred form of the invention this rib begins at the center of the base of the pipe and follows the side thereof upward to or below the horizontal center thereof. Each section is here illustrated as provided with two of these ribs alternately disposed at an angle to each other, whereby the lower body of liquid sweeps in opposite directions and carries the sediment upward into the upper current of liquid. Each of the ribs is inclined and rises toward the inlet end of the pipe to properly present a contact-face to the traveling liquid therein.

The ribs are shown as disposed at an angle of about thirty degrees; but this may be varied as desired. The ribs are also shown as formed integral with the pipe; but it is obvious that they may be formed separate and attached thereto. It is also obvious that changes may be made in the details of construction and configuration of the pipe and ribs without affecting the spirit of the invention as defined by the appended claims.

From the foregoing description the operation will be clearly understood, and the lower body of liquid is directed across the base of the pipe upward into the moving liquid above and by that carried to the discharge. This prevents the collection of sediment on the bottom of the pipe, and the location of the ribs in the lower half of the pipe prevents any downward current of the liquid such as would return the sediment once raised to the lower part of the pipe. The alternate disposition of the ribs also effectually prevents any such rotary or spiral movement of the entire body of liquid within the pipe. The respective deflected courses of the liquid by the ribs have been indicated on the drawings by plain and feathered arrows.

Having described our invention and set forth its merits, what we claim, and desire to secure by Letters Patent, is—

1. A concaved or curved pipe or conduit
5 having its upper portion free of deflecting obstructions and provided at its lower portion with upward obliquely-disposed means following the curvature of the pipe to deflect a current of liquid transversely to and upward
10 toward a moving body of liquid above said means, substantially as specified.

2. A pipe or conduit having its upper portion free of deflecting obstructions and provided at its lower portion with alternately-
15 disposed means to deflect a current of liquid transversely in alternately opposite directions to a moving body of liquid above said means, substantially as specified.

3. A pipe or conduit having at its lower
20 portion alternate upwardly-disposed ribs located at an angle to each other, substantially as specified.

4. A pipe or conduit having upwardly-dis-

posed ribs extending from the base of said pipe and terminating at or below the vertical
25 center thereof, substantially as specified.

5. A pipe or conduit having independent alternately-disposed ribs extending from the center of the pipe-base upward longitudinally
30 of the pipe and terminating at or below the vertical center thereof, substantially as specified.

6. A pipe or conduit having independent alternately-disposed ribs extending upward with the curvature of the pipe from its base
35 longitudinally of the pipe and terminating at or below the vertical center thereof, substantially as specified.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses. 40

HENRY M. GORDON.

HENRY A. GORDON.

Witnesses:

JNO. B. VAUGHN,

IRA G. SUTTON.